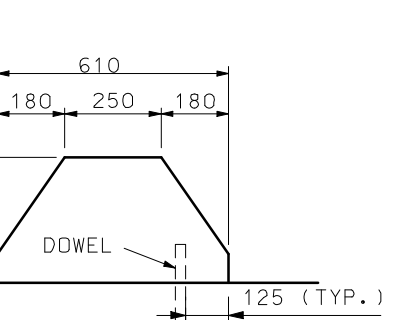
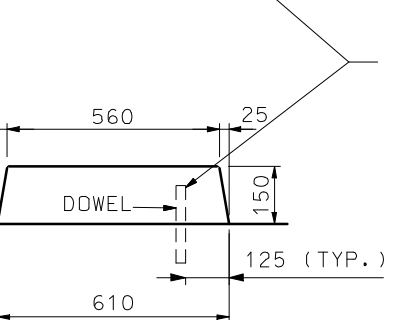


DELINEATOR



SECTION A-A



SECTION B-B

GENERAL NOTES:

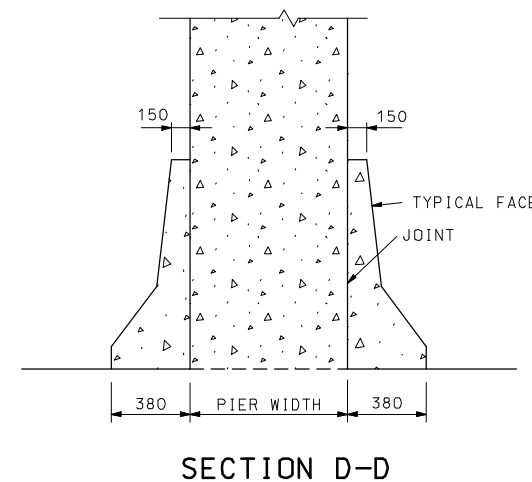
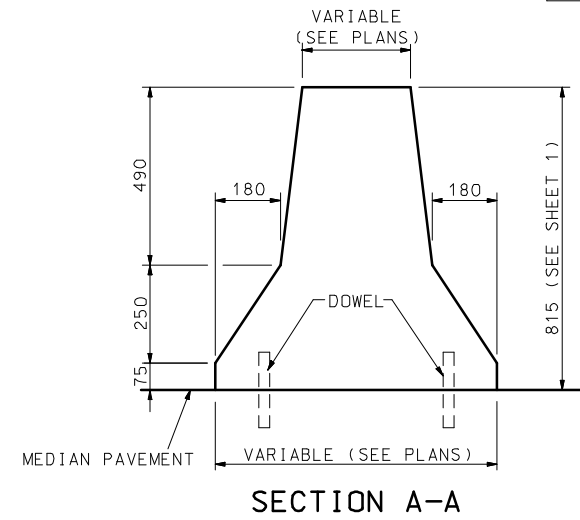
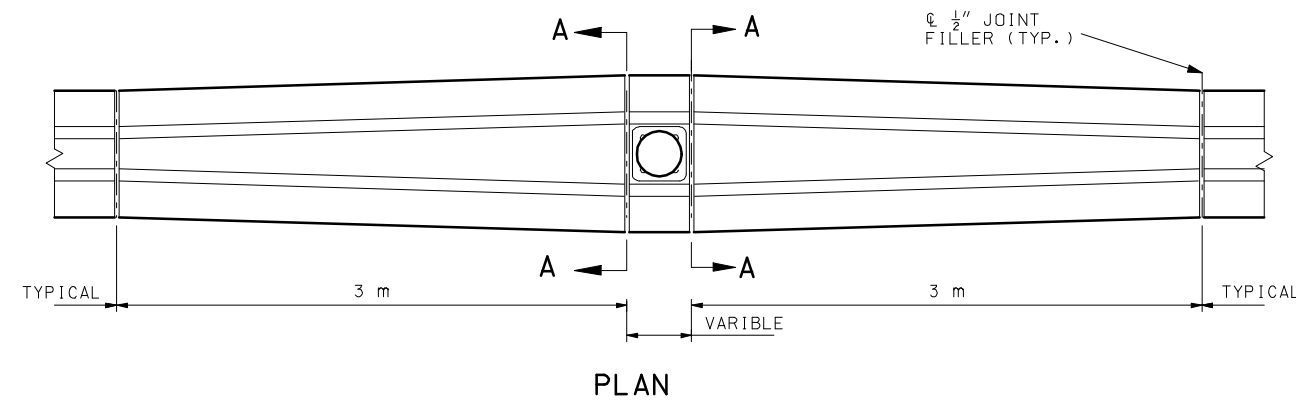
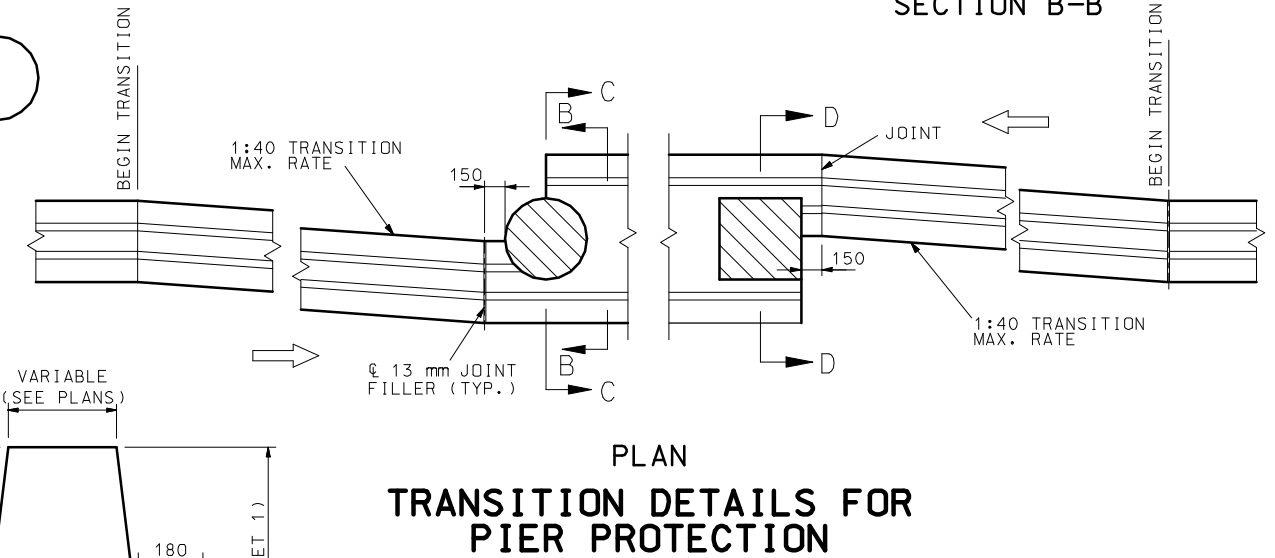
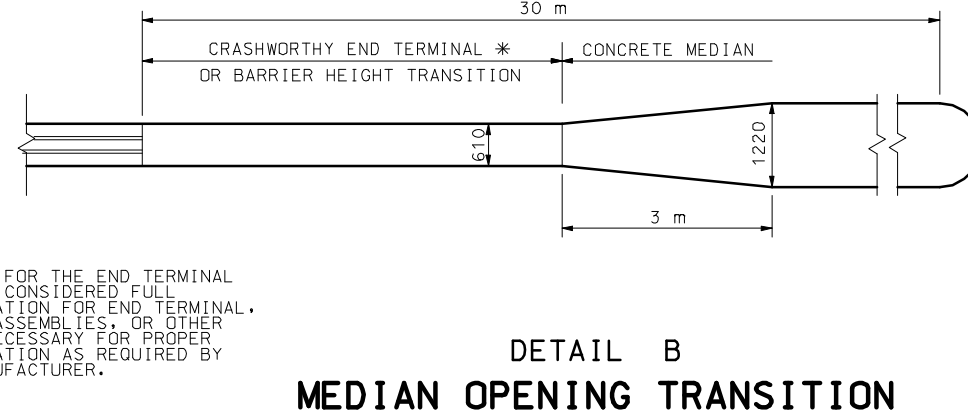
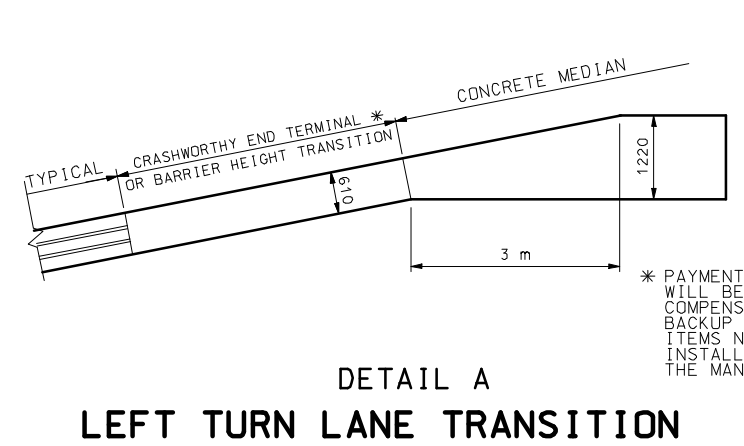
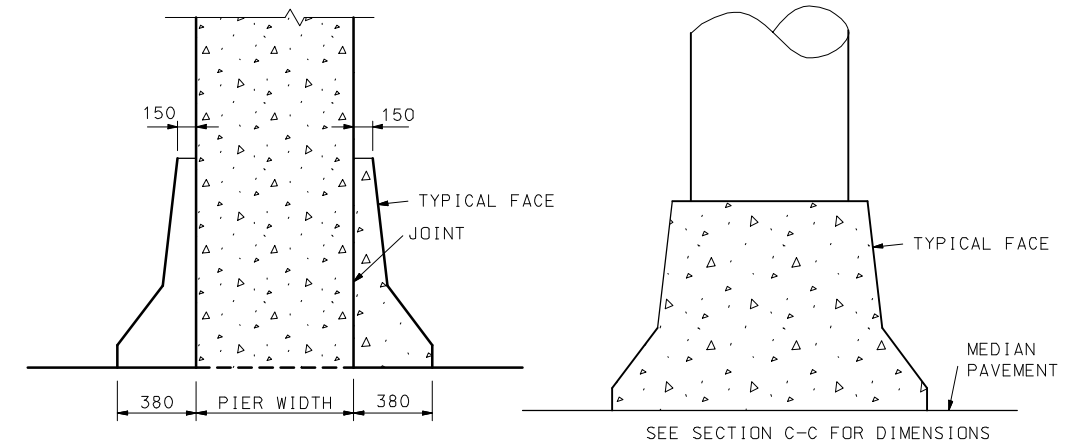
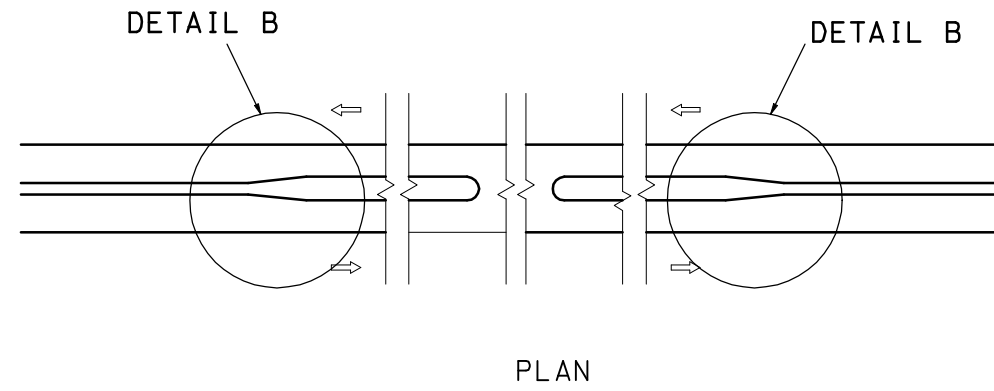
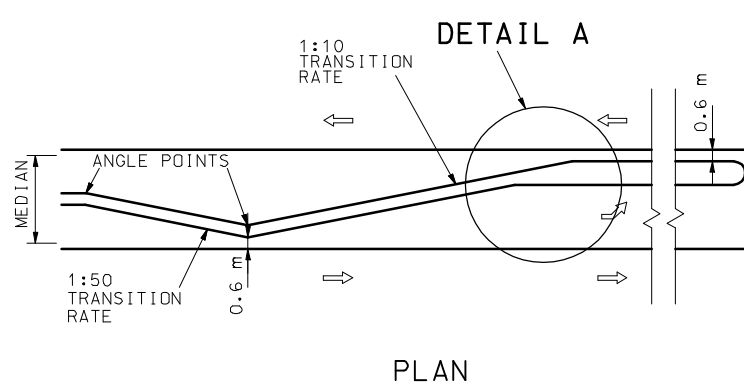
ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.

HEIGHT TRANSITIONS SHALL NOT BE USED IN LOCATIONS WHERE THE POSTED SPEED IS GREATER THAN 35 MPH.

ALL TOP AND END EDGES SHALL BE CHAMFERED 19 mm.

EXPANSION JOINTS SHALL BE PROVIDED IN THE BARRIER TO MATCH EXPANSION JOINTS IN PAVEMENT.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION			
PERMANENT CONCRETE TRAFFIC BARRIER TYPE A AND B			
DATE: _____	EFFECTIVE: 09-01-2006	M617.10D	1/7

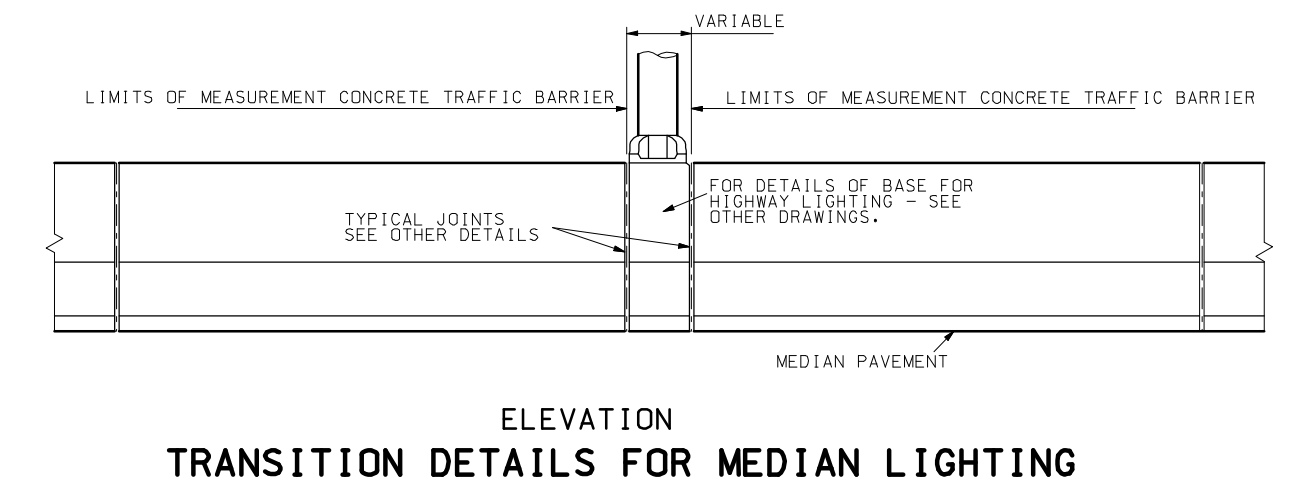


GENERAL NOTES:

ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.

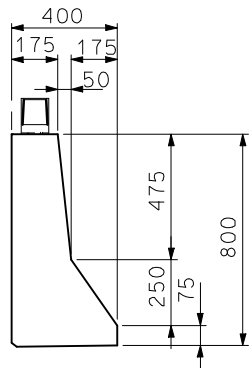
FOR DETAILS AND LOCATION OF DOWELS, SEE SHEET 1.

JOINT SHALL BE TWO LAYERS OF 25 kg. SMOOTH ROLL ROOFING TO FORM JOINT BETWEEN PIER AND BARRIER. IN SEISMIC AREAS, A 25 mm JOINT WITH JOINT FILLER AND SEALER SHALL BE USED.

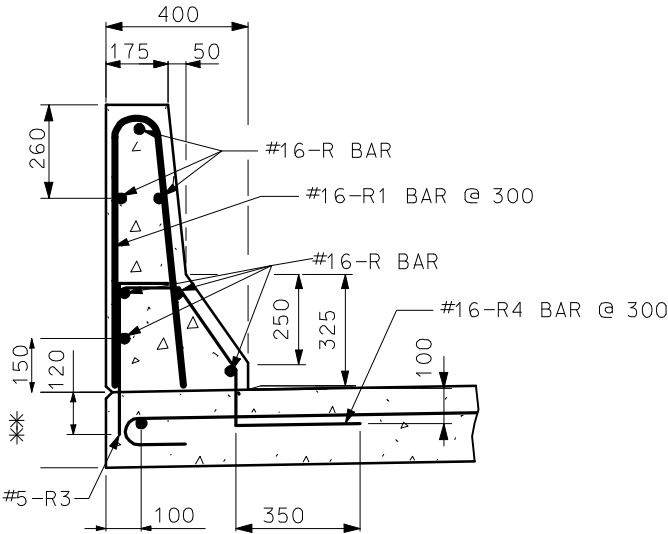


MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION			
PERMANENT CONCRETE TRAFFIC BARRIER TYPE A AND B			
DATE: _____	EFFECTIVE: 09-01-2006	M617.10D	2/7

DELINEATOR



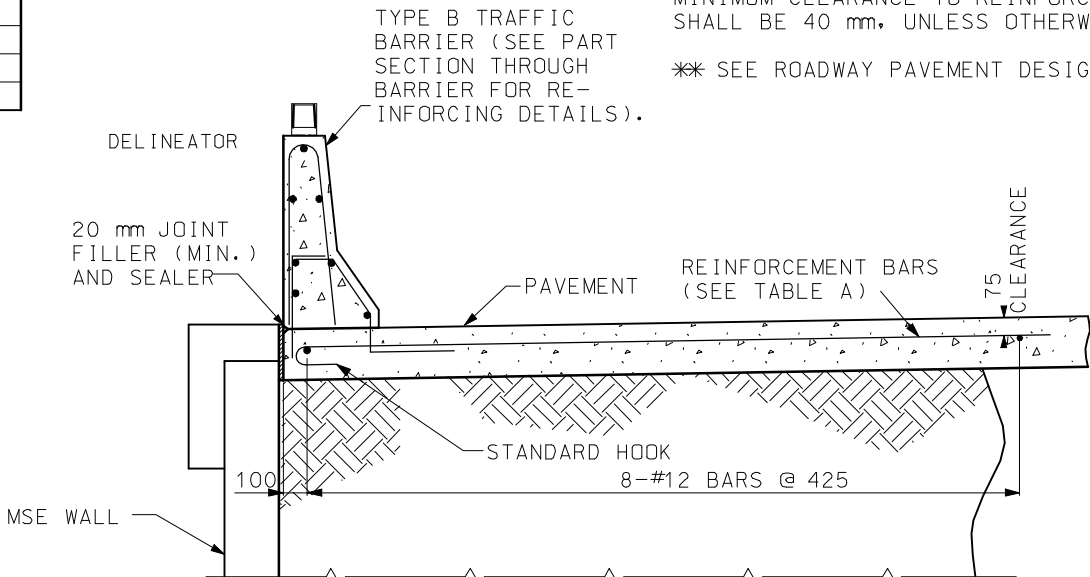
TYPE B (MODIFIED)  
TYPICAL SECTION



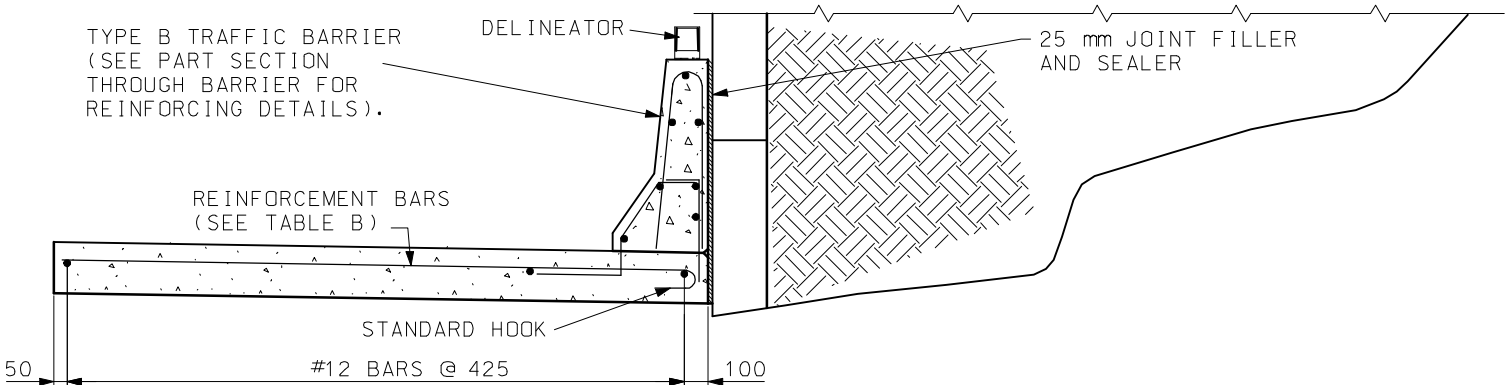
PART SECTION THROUGH BARRIER

- NOTES:
- ALL REINFORCING STEEL SHALL BE EPOXY COATED.
  - NO DIRECT PAYMENT WILL BE MADE FOR REINFORCING STEEL.
  - MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 40 mm, UNLESS OTHERWISE SHOWN.
  - \*\* SEE ROADWAY PAVEMENT DESIGN.

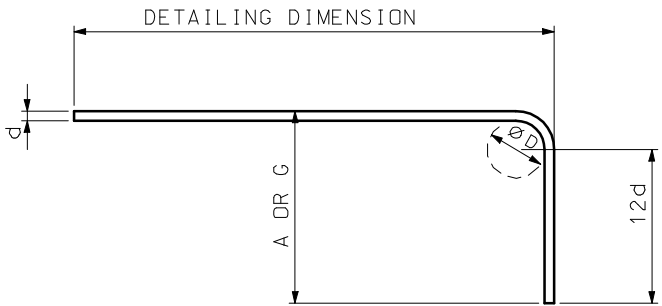
TABLE A TRANSVERSE PAVEMENT REINFORCEMENT	
PAVEMENT THICKNESS **	BAR SIZE & SPACING
250 mm	#19 @ 225 mm
275 mm	#16 @ 200 mm
350 mm	#16 @ 275 mm
250 mm	#19 @ 225 mm
≥ 275 mm	#16 @ 200 mm



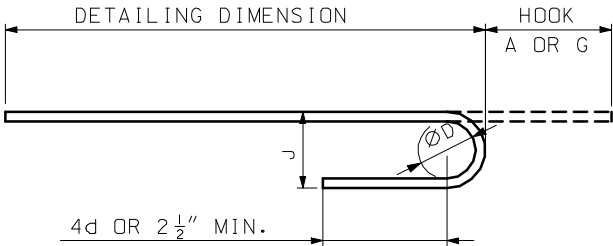
TYPE B TRAFFIC BARRIER ON TOP OF MSE WALL



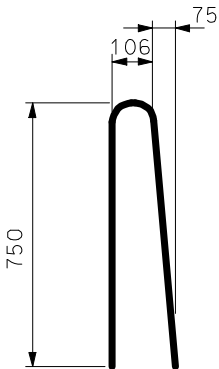
TYPE B TRAFFIC BARRIER AT THE SIDE OF MSE WALL



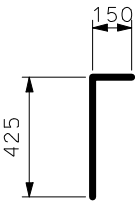
90° HOOKS



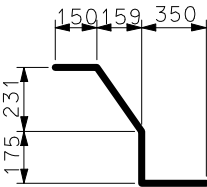
180° HOOKS



#5-R1



#5-R3



#5-R4

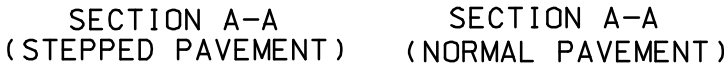
- NOTES:
- TYPE B (MODIFIED) SHALL BE USED ONLY AT LOCATIONS SHOWN IN PLANS.
  - FOR DELINEATOR DETAILS, SEE SHEET 1.
  - GENERAL NOTES:
  - ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.

TABLE B TRANSVERSE PAVEMENT REINFORCEMENT	
PAVEMENT THICKNESS **	BAR SIZE & SPACING
250 mm	#19 @ 225 mm
275 mm	#16 @ 200 mm
≥ 350 mm	#16 @ 275 mm
250 mm	#19 @ 225 mm
≥ 275 mm	#16 @ 200 mm

≥ 350 mm

END HOOK DIMENSIONS				
BAR SIZE	D (mm)	ALL GRADES		
		180° HOOKS		90° HOOKS
		A OR G	J	A OR G
#5	94 mm	175 mm	125 mm	250 mm
#6	113 mm	200 mm	150 mm	300 mm

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION			
		<b>PERMANENT CONCRETE TRAFFIC BARRIER</b> AT MSE WALL TYPE B	
DATE: _____	EFFECTIVE: 09-01-2006	<b>M617.10D</b>	3 7



## REINFORCING DETAILS



SECTION C-C  
(NORMAL PAVEMENT)

NOTES:

BAR SPLICES SHALL BE A MINIMUM OF 24 TIMES THE  
NOMINAL DIAMETER OF THE BAR.

ANY METHOD DEvised BY THE CONTRACTOR AND APPROVED BY THE ENGINEER THAT WILL ASSURE THE LONGITUDINAL REINFORCING STEEL WILL BE POSITIONED  $\pm 13$  mm AS DIMENSIONED WILL BE SATISFACTORY.

THE CONTRACTOR HAS THE OPTION TO SLIP-FORM THE BARRIER. IN WHICH CASE, ADDITIONAL REINFORCEMENT MAY BE TIED TO THE UPPER TWO-THIRDS OF THE REINFORCING AGE TO PROVIDE BRACING.

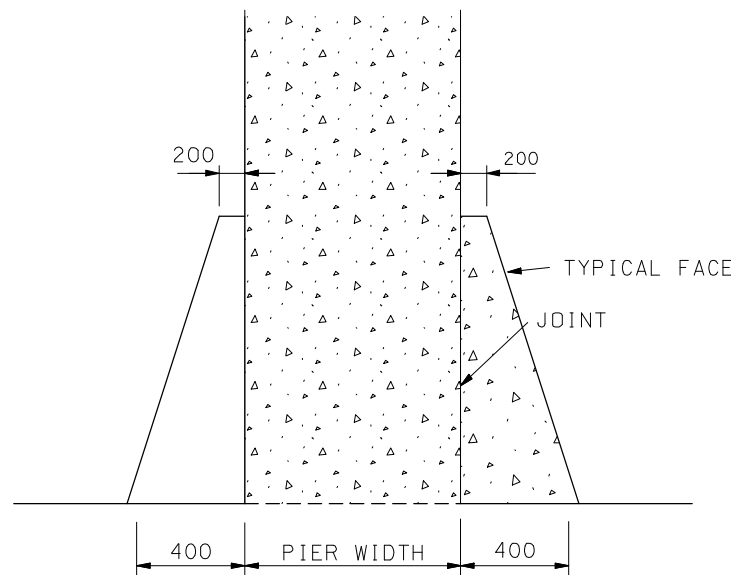
SAWED JOINTS SHALL BE LOCATED AT PAVEMENT  
TRANSVERSE JOINTS.

GENERAL NOTES:

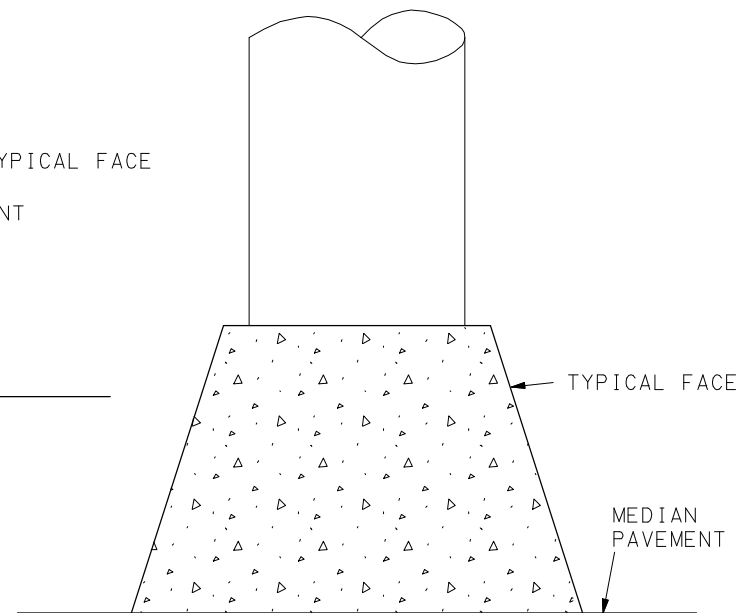
ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.



MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION			
	<b>PERMANENT CONCRETE TRAFFIC BARRIER</b> TYPE C		
DATE: _____	EFFECTIVE: 09-01-2006	<b>M617.10D</b>	<div style="text-align: right;">4</div> <div style="text-align: right;">7</div>

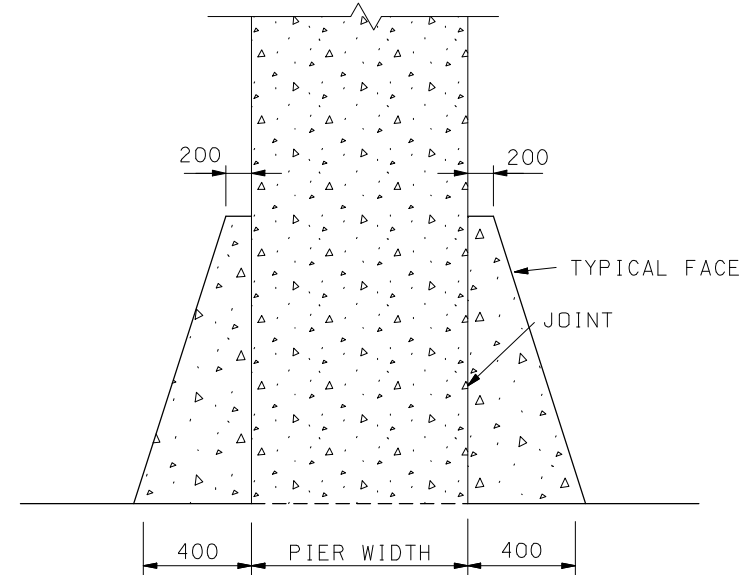


SECTION A-A

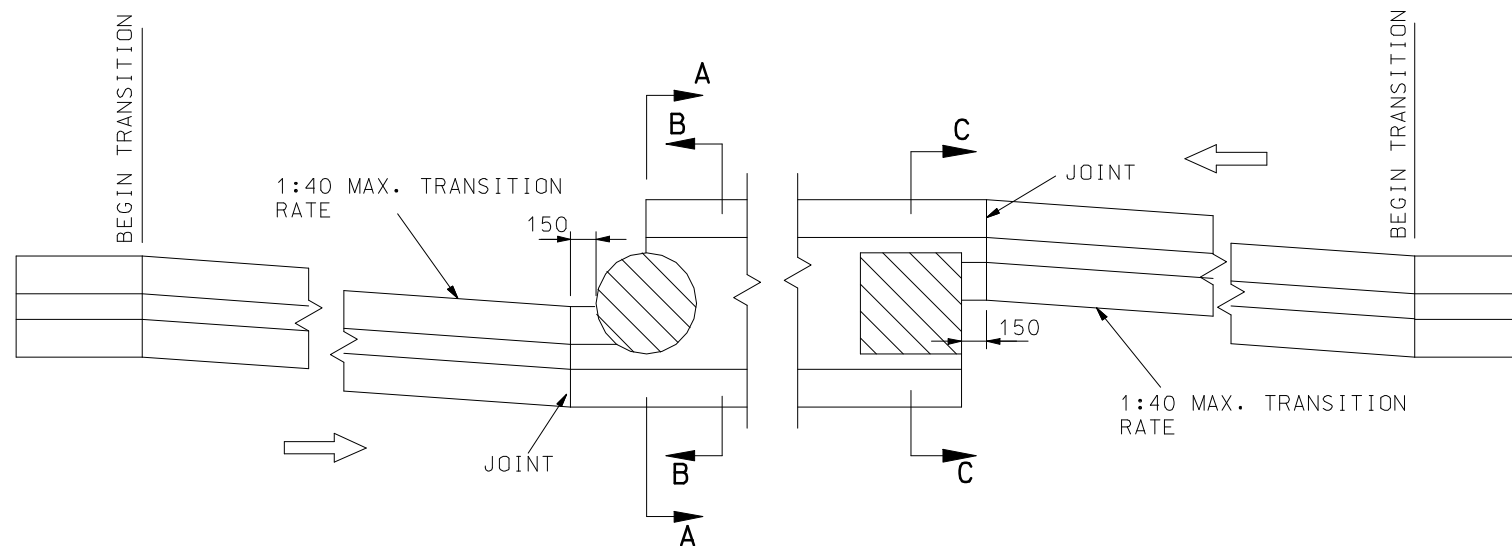


SECTION B-B

SEE SECTION C-C FOR DIMENSIONS



SECTION C-C



PLAN

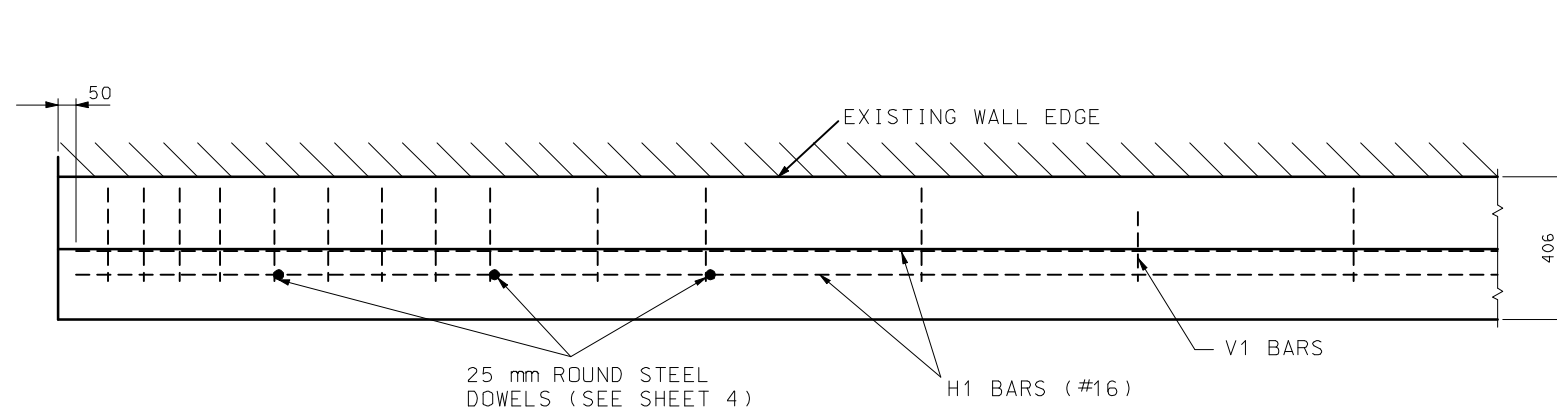
TRANSITION DETAILS FOR PIER PROTECTION

GENERAL NOTES:

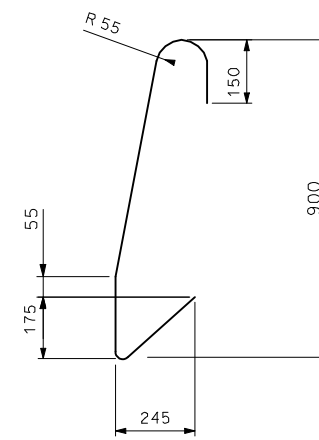
ALL DIMENSIONS SHOWN ARE IN mm UNLESS OTHERWISE NOTED.

JOINT SHALL BE TWO LAYERS OF 1.55 kg SMOOTH ROLL ROOFING TO FORM JOINT BETWEEN PIER AND BARRIER IN SEISMIC AREAS, A 25 mm JOINT WITH JOINT FILLER AND SEALER SHALL BE USED.

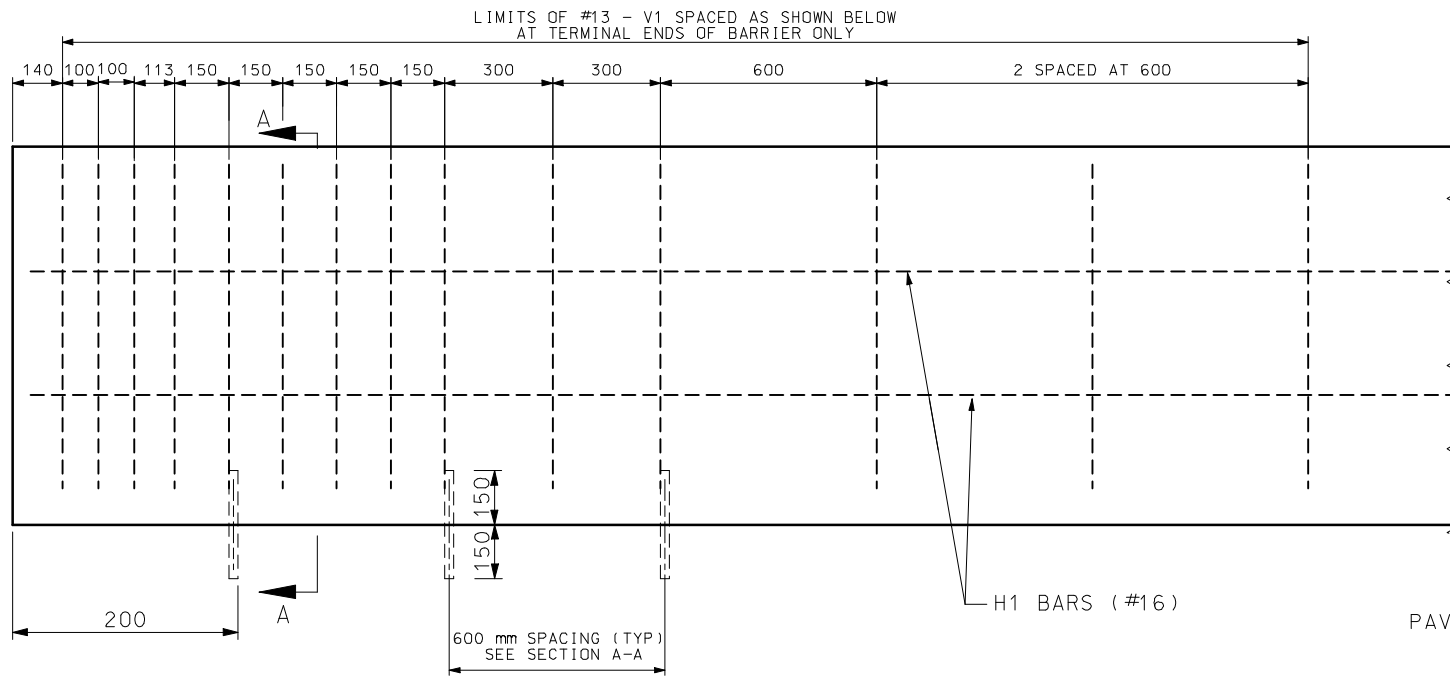
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION			
<p><b>PERMANENT CONCRETE TRAFFIC BARRIER</b></p> <p>TYPE C</p>			
DATE: _____	EFFECTIVE: 09-01-2006	<b>M617.10D</b>	<div>5</div> <div>7</div>



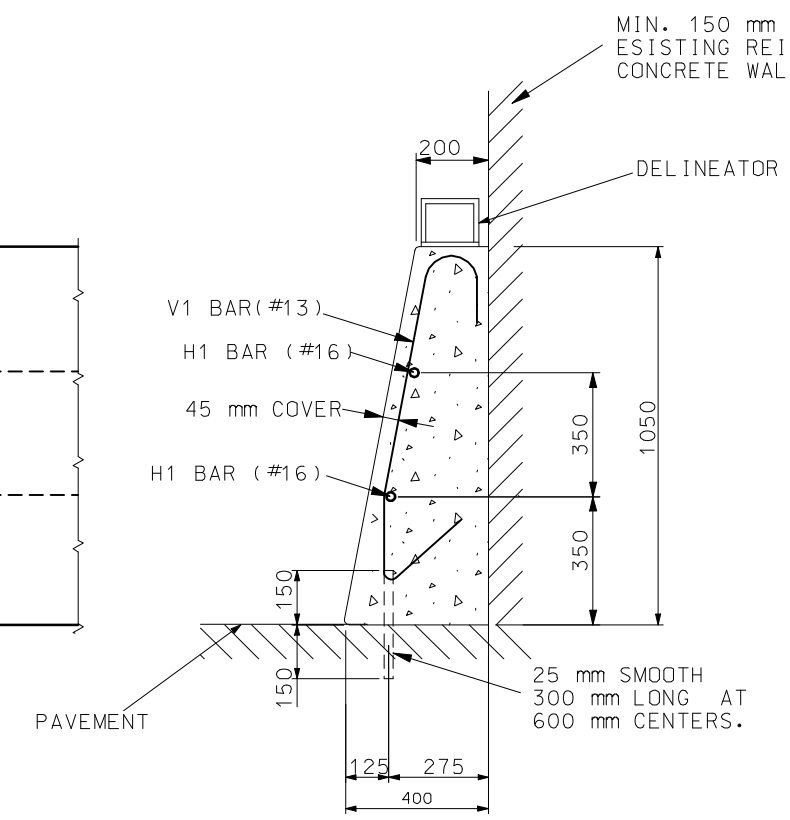
PLAN VIEW



V1 BAR (#13)



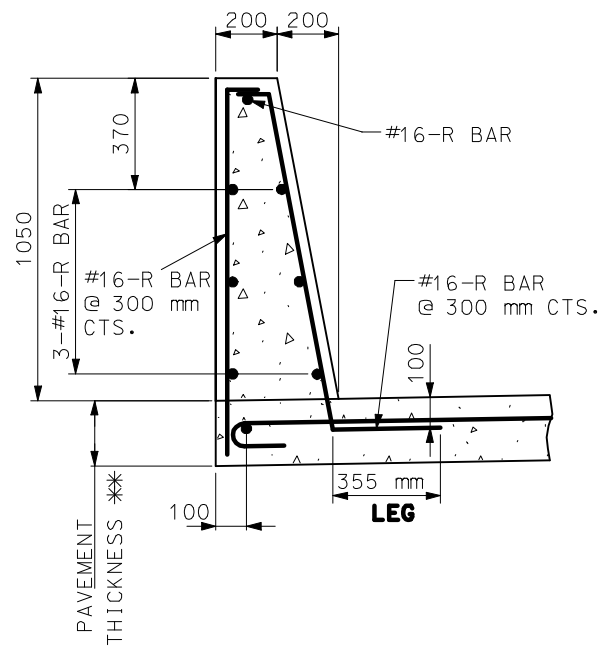
ELEVATION  
REINFORCING DETAILS



SECTION A-A

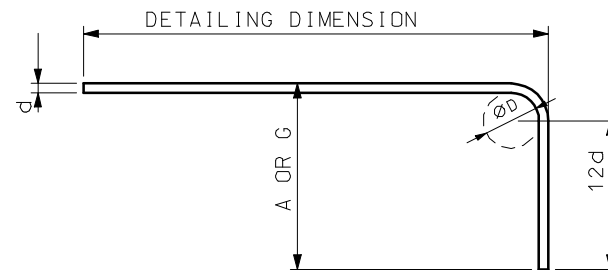
- NOTES:
- ALL DIMENSIONS SHOWN IN mm UNLESS OTHERWISE NOTED.
- BAR SPLICES SHALL BE A MINIMUM OF 24 TIMES THE NOMINAL DIAMETER OF THE BAR.
- ANY METHOD DEvised BY THE CONTRACTOR AND APPROVED BY THE ENGINEER THAT WILL ASSURE THE LONGITUDINAL REINFORCING STEEL WILL BE POSITIONED  $\pm 13$  mm AS DIMENSIONED WILL BE SATISFACTORY.
- THE CONTRACTOR HAS THE OPTION TO SLIP-FORM THE BARRIER. IN WHICH CASE, ADDITIONAL REINFORCEMENT MAY BE TIED TO THE UPPER TWO-THIRDS OF THE REINFORCING CAGE TO PROVIDE BRACING.
- THIS BARRIER SHALL NOT BE USED TO SUPPORT HIGHWAY LIGHTING POLES.
- THIS BARRIER SHALL NOT BE USED FOR BRIDGE ROADWAY APPLICATIONS.
- SAWED JOINTS SHALL BE LOCATED AT PAVEMENT TRANSVERSE JOINTS.
- TYPE D SHALL BE USED ONLY AT LOCATIONS SHOWN ON PLANS.
- FOR DELINEATOR DETAILS, SEE SHEET 1.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION			
PERMANENT CONCRETE TRAFFIC BARRIER TYPE D			
DATE: _____	EFFECTIVE: 09-01-2006	M617.10D	6/7

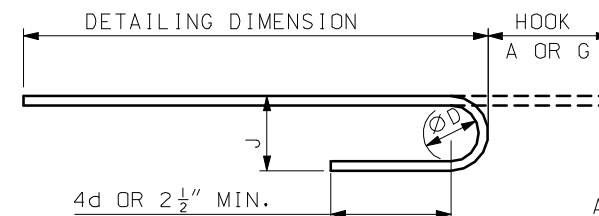


PART SECTION THROUGH BARRIER

TABLE A TRANSVERSE PAVEMENT REINFORCEMENT	
PAVEMENT THICKNESS **	BAR SIZE & SPACING
250 mm	#19 @ 225 mm
275 mm	#16 @ 200 mm
≥ 350 mm	#16 @ 275 mm
250 mm	#19 @ 225 mm
275 mm	#16 @ 200 mm
≥ 350 mm	#16 @ 275 mm



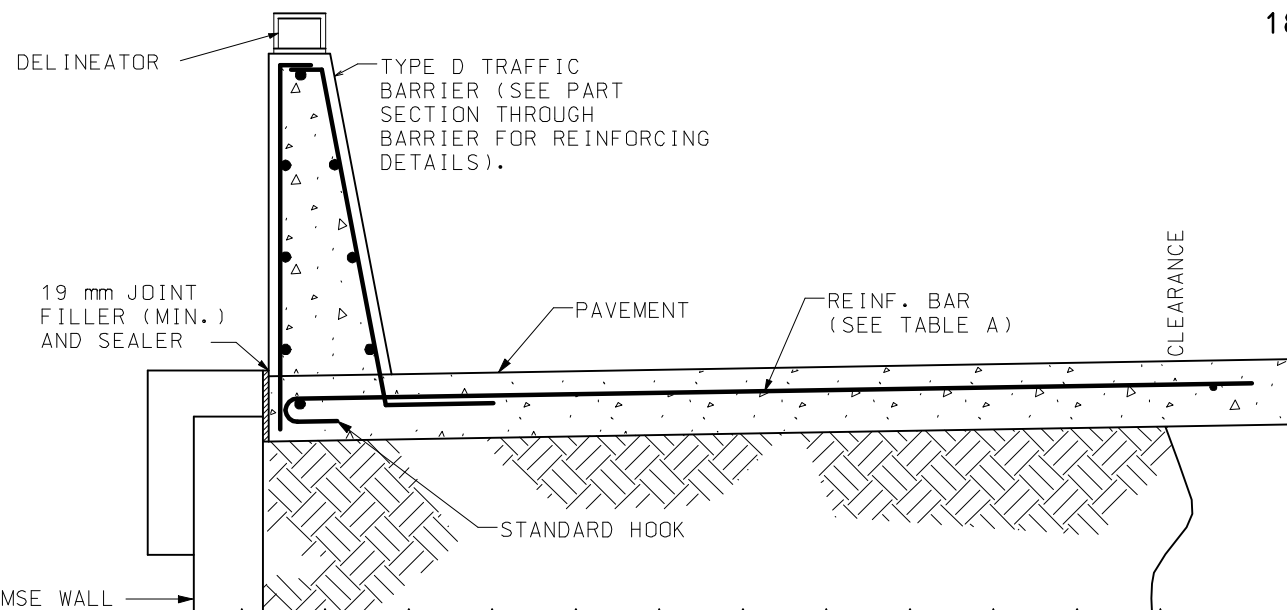
90° HOOKS



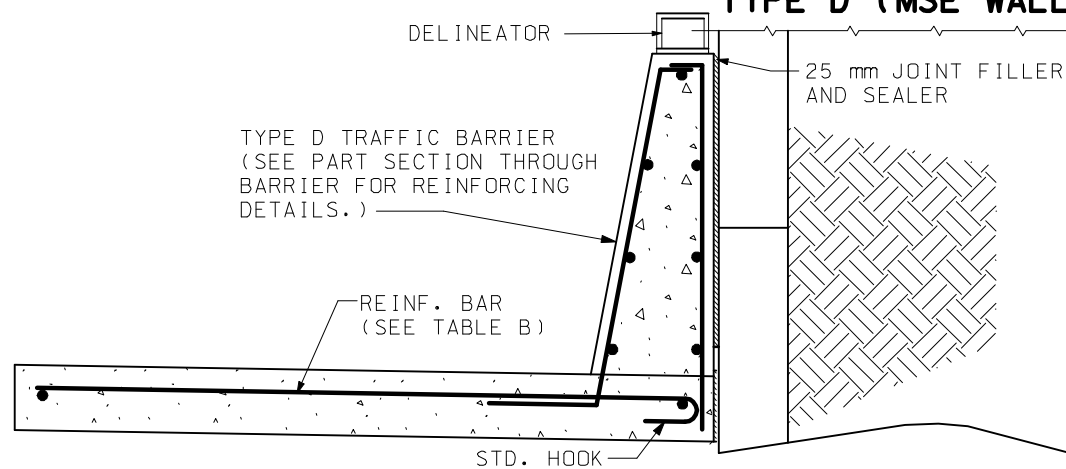
180° HOOKS

END HOOK DIMENSIONS				
BAR SIZE	D (mm)	ALL GRADES		
		180° HOOKS	90° HOOKS	
		A OR G	J	A OR G
#5	83	175	125	250
#6	112	200	150	300

ALL STANDARD HOOKS AND BENDS OTHER THAN 180° TO BE BENT WITH THE SAME PROCEDURE AS FOR 90° STANDARD HOOKS.

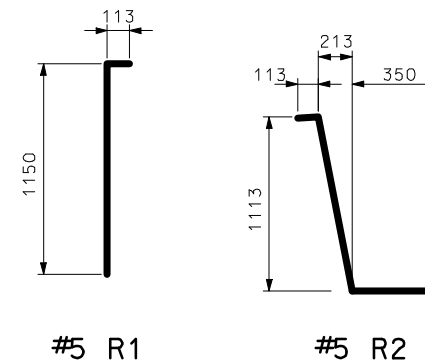


TYPE D (MSE WALL) TRAFFIC BARRIER ON TOP OF MSE WALL



TYPE D TRAFFIC BARRIER AT THE SIDE OF MSE WALL

TABLE B TRANSVERSE PAVEMENT REINFORCEMENT	
PAVEMENT THICKNESS **	BAR SIZE & SPACING
250 mm	#19 @ 225 mm
275 mm	#16 @ 200 mm
≥ 350 mm	#16 @ 275 mm
250 mm	#19 @ 225 mm
275 mm	#16 @ 200 mm
≥ 350 mm	#16 @ 275 mm



#5 R1

#5 R2

NOTES:

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 40 mm, UNLESS OTHERWISE SHOWN.

\*\* SEE ROADWAY PAVEMENT DESIGN.

TYPE D SHALL BE USED ONLY AT LOCATIONS SHOWN ON PLANS.

FOR DELINEATOR DETAILS, SEE SHEET 1.

GENERAL NOTE:

ALL DIMENSIONS GIVEN ARE mm UNLESS OTHERWISE NOTED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION			
		<b>PERMANENT CONCRETE TRAFFIC BARRIER</b>	
		AT MSE WALL TYPE D	
DATE: _____	EFFECTIVE: 09-01-2006	M617.10D	7 7